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Nuclear and Particle Physics

Volume 5

Q-Values and Excitation Functions of Nuclear Reactions

Part a:

Q-Values

By K. A. Keller, J. Lange, H. Münzel
Editor: H. Schopper

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This volume, I/5 a, contains the reaction energies (Q-values) of nuclear reactions and the subsequent volumes, I/5 b and c, will contain a compilation of excitation functions.

Q-values were tabulated for reactions with up to eleven outgoing particles. As target nuclides all stable and some radioactive nuclides were included. As projectiles the most important nuclei up to medium nuclear masses were selected. Q-values not contained in the tables can be computed with the help of the tables of mass excesses at the end of thu volume.

The computation of the Q-values is based on the mass excesses from experimental data (Wapstra and Gove, 1971) or on the mass formula of Myers and Swiatecki, 1965 (★ in the tables).

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γ n p d ^{3}He α ^{6}Li ^{7}Li
^{10}B ^{11}B ^{12}C ^{14}N ^{16}O ^{18}O ^{19}F ^{20}Ne
^{22}Ne ^{31}P ^{32}S ^{40}Ar ^{40}Ca ^{64}Zn ^{84}Kr ^{127}J ^{132}Xe
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